

**Communication method between mobile telephone and base station - involves using intermediate zone to transmit between base station and broadcast repeater, transposing telephone channel to intermediate channel**

Patent Assignee: SAGEM SA (SAGE)

Inventor: HURIAU A; ZIBELL L

Patent Family ( 4 patents, 24 & countries )

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 860953	A1	19980826	EP 1998400337	A	19980213	199838	B
FR 2760167	A1	19980828	FR 19972099	A	19970221	199840	E
EP 860953	B1	20040519	EP 1998400337	A	19980213	200433	E
DE 69823901	E	20040624	DE 69823901	A	19980213	200442	E
			EP 1998400337	A	19980213		

Priority Applications (no., kind, date): FR 19972099 A 19970221; EP 1998400337 A 19980213

#### Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes		
EP 860953	A1	FR	5	3			
Regional Designated States,Original	AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI						
EP 860953	B1	FR					
Regional Designated States,Original	DE FI IT SE						
DE 69823901	E	DE			Application	EP 1998400337	
					Based on OPI patent	EP 860953	

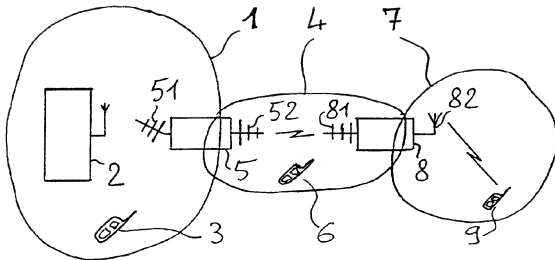
#### Alerting Abstract EP A1

The method involves using a broadcast repeater (8) covering a shadow zone (7) and a mobile telephone (9) set for one frequency channel. An intermediate zone (4) transmits between the base station (2) and a broadcast repeater.

The intermediate zone transposes the telephone channel to an intermediate channel. The channel is transposed back to the first channel for broadcast in the shadow zone.

ADVANTAGE - Allows the correct operation of the network in a mobile telephone shadow zone.

#### Main Drawing Sheet(s) or Clipped Structure(s)



**Title Terms /Index Terms/Additional Words:** COMMUNICATE; METHOD; MOBILE; TELEPHONE; BASE ; STATION; INTERMEDIATE; ZONE; TRANSMIT; BROADCAST; REPEATER; TRANSPOSE; CHANNEL

#### Class Codes

##### International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
H04B-007/26			Main		"Version 7"
H04B-0007/26	A	I		R	20060101
H04B-0007/26	C	I		R	20060101

**ECLA:** H04B-007/26B2

File Segment: EPI;

DWPI Class: W01; W02

Manual Codes (EPI/S-X): W01-B05A1A; W02-C03B; W02-C03C1A

#### Original Publication Data by Authority

##### Germany

**Publication No.** DE 69823901 E (Update 200442 E)

**Publication Date:** 20040624

**Assignee:** SAGEM SA; FR (SAGE)

**Language:** DE

**Application:** DE 69823901 A 19980213 (Local application)

EP 1998400337 A 19980213 (Application)

**Priority:** FR 19972099 A 19970221

**Related Publication:** EP 860953 A (Based on OPI patent )

**EPO**

**Publication No.** EP 860953 A1 (Update 199838 B)

**Publication Date:** 19980826

**Verfahren zur Funktelefonübertragung zwischen einer Basisstation und einem mobilen Telefon mittels eines Funkrelais**

**Method of radiotelephone communication between a base station and a mobile telephone by means of a repeater**

**Procede de radiotelephonie entre une station de base et un telephone mobile, par l'intermediaire d'un repeteur**

**Assignee:** SAGEM SA, 6, Avenue d'Iena, 75116 Paris, FR (SAGE)

**Inventor:** Huriau, Alain, 10 Chemin de la Corderie, 59910 Bondues, FR

**Zibell, Laurent, 13 rue Ginoux, 75015 Paris, FR**

**Agent:** Bloch, Gerard, 2, square de l'Avenue du Bois, 75116 Paris, FR

**Language:** FR (5 pages, 3 drawings)

**Application:** EP 1998400337 A 19980213 (Local application)

**Priority:** FR 19972099 A 19970221

**Designated States:** (Regional Original) AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

**Original IPC:** H04B-7/26(A)

**Current IPC:** H04B-7/26(R,I,M,EP,20060101,20051008,A) H04B-7/26(R,I,M,EP,20060101,20051008,C)

**Current ECLA class:** H04B-7/26B2

**Original Abstract:** Communication method between mobile telephone and base station

The method involves using a broadcast repeater (8) covering a shadow zone (7) and a mobile telephone (9) set for one frequency channel. An intermediate zone (4) transmits between the base station (2) and a broadcast repeater.

The intermediate zone transposes the telephone channel to an intermediate channel. The channel is transposed back to the first channel for broadcast in the shadow zone.

**Claim:**

1. Procédé de radiotelephonie entre une station de base (2) couvrant une cellule de communication (1) et un telephone mobile (9) par l'intermediaire d'un repeteur de diffusion (8) couvrant une zone d'ombre (7), le telephone (9) étant cale sur une frequence de canal (Ci) determinee par la station de base (2), caracterise par le fait qu'on cree une zone intermediaire de transmission (4) entre la station de base (2) et le repeteur de diffusion (8) et, de la cellule de base (1) a la zone intermediaire (4), on procede a une transposition du canal de transmission du canal du telephone (Ci) a un canal intermediaire (Cj) et, de la zone intermediaire (4) a la zone d'ombre (7), on procede a une transposition de canal inverse (Cj a Ci).

**Publication No.** EP 860953 B1 (Update 200433 E)

**Publication Date:** 20040519

**Verfahren zur Funktelefonübertragung zwischen einer Basisstation und einem mobilen Telefon mittels eines Funkrelais**

**Method of radiotelephone communication between a base station and a mobile telephone by means of a repeater**

**Procede de radiotelephonie entre une station de base et un telephone mobile, par l'intermediaire d'un repeteur**

**Assignee:** SAGEM SA, 6, Avenue d'Iena, 75116 Paris, FR

**Inventor:** Huriau, Alain, 10 Chemin de la Corderie, 59910 Bondues, FR

**Zibell, Laurent, 13 rue Ginoux, 75015 Paris, FR**

**Agent:** Bloch, Gerard, 2, square de l'Avenue du Bois, 75116 Paris, FR

**Language:** FR

**Application:** EP 1998400337 A 19980213 (Local application)

**Designated States:** (Regional Original) DE FI IT SE

Original IPC: H04B-7/26(A)

Current IPC: H04B-7/26(R,A,I,M,EP,20060101,20051008,A) H04B-7/26(R,I,M,EP,20060101,20051008,C)

Current ECLA class: H04B-7/26B2

Claim:

1. Verfahren zum Funkfernsprechen zwischen einer Basisstation (2), die eine Kommunikationszelle (1) umfasst und einem Mobiltelefon (9), über einen Sendezwischenverstärker (8), der einen Schattenbereich (7) abdeckt, wobei das Telefon (9) fest auf eine von der Basisstation (2) bestimmte Kanalfrequenz eingestellt ist, **dadurch gekennzeichnet, dass** ein Zwischenübertragungsbereich (4) zwischen der Basisstation (2) und dem Sendezwischenverstärker (8) geschaffen wird, und von der Basisstation (2) zum Zwischenbereich (4) eine Umsetzung des Übertragungskanals des Telefonkanals (Ci) zu einem Zwischenkanal (Cj) vorgenommen wird, und vom Zwischenbereich (4) zum Schattenbereich (7) eine umgekehrte Kanalumsetzung (Cj zu Ci) vorgenommen wird.

1. Radiotelephony procedure between a base station (2) covering a communication cell (1) and a mobile telephone (9), making use of a broadcasting repeater (8) covering a shadow area (7), the telephone (9) being locked onto a channel frequency (Ci) determined by the base station (2), **characterized in that** an intermediate transmission area (4) is created between the base station (2) and the broadcasting repeater (8), the transmission channel is transposed from the telephone channel (Ci) to an intermediate channel (Cj) in the section from the base cell (1) to the intermediate area (4), and the inverse channel transposition (Cj to Ci) is carried out in the section from the intermediate area (4) to the shadow area (7).

1. Procédé de radiotéléphonie entre une station de base (2) couvrant une cellule de communication (1) et un téléphone mobile (9) par l'intermédiaire d'un répéteur de diffusion (8) couvrant une zone d'ombre (7), le téléphone (9) étant calé sur une fréquence de canal (Ci) déterminée par la station de base (2), **caractérisé par le fait qu'on crée une zone intermédiaire de transmission (4) entre la station de base (2) et le répéteur de diffusion (8) et, de la cellule de base (1) à la zone intermédiaire (4), on procède à une transposition du canal de transmission du canal du téléphone (Ci) à un canal intermédiaire (Cj) et, de la zone intermédiaire (4) à la zone d'ombre (7), on procède à une transposition de canal inverse (Cj à Ci).**

## France

Publication No. FR 2760167 A1 (Update 199840 E)

Publication Date: 19980828

Assignee: SAGEM SA (SAGE)

Inventor: HURIAU A

ZIBELL L

Language: FR

Application: FR 19972099 A 19970221 (Local application)

Original IPC: H04Q-7/36(A)

Current IPC: H04B-7/26(R,A,I,M,EP,20060101,20051008,A) H04B-7/26(R,I,M,EP,20060101,20051008,C)

Current ECLA class: H04B-7/26B2